

**Notice of Allowability**

Application No.

09/893,385

Examiner

Ted T. Vo

Applicant(s)

BATES ET AL.

Art Unit

2122

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 12/22/04.
2. ☒ The allowed claim(s) is/are 4,7,8,10-20,24 and 27-39.
3. ☐ The drawings filed on \_\_\_\_\_ are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
TED T. VO  
Primary Examiner

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1. This communication is in response to the amendment after final filed on 12/22/04, where the amendment is fully responsive to the allowable subject matter of Office action.

Claims 1-3, 5, 6, 9, 21-23, 25, and 26 are canceled.

Claims 8, 10-20, and 28-39 remains allowed over the prior art of record, Hanson et al., "A Machine-Independent Debugger", in accordance to Office action dated 10/22/04.

The amendment which has rewritten Claims 4, 7, 24, and 27 into independent forms, including limitations of the base claims and intervening claims overcomes the closest art of record, Hanson et al., "A Machine-Independent Debugger".

#### **Reasons for Allowance**

2. Claims 4, 7-8, 10-20, 24, and 27-39 are allowed.

Prior art of record, Hanson, "A Machine-Independent Debugger", discloses a method of debugging a program in a computer system including automatically removing or inserting at least a portion of breakpoints where each breakpoint is associated with a particular instruction or function in the program, when a debugger gets control of the program, for the particular job (See page 1279, Figure 1).

- Hanson fails to disclose a useful breakpoint determined by executing a task to identify each unexecuted breakpoint located in an unexecuted portion of the program or by analyzing a behavior of a user responsible for setting the at least one useful breakpoint (Addressed to limitations in Claims 4 or 24).

- Hanson fails to disclose at least one thread that is prevented from continuing execution and wherein any breakpoints which may have been encountered only by the at least one thread during continuing execution are considered useless and are not reestablished (Addressed to limitations in Claims 7 or 27).

As pointed out by Applicants (Remarks, pages 9, fourth paragraph), Claims 4, 7, 24 and 27 are written in independent forms including limitations of the base claims and intervening claims.

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Claims 8, 12, and 28 remain allowed as addressed in the Office action dated on 10/22/04 because Hanson fails to disclose determining whether at least one of the removed breakpoints is useful comprises executing a task to identify at least one breakpoint which may be encountered upon resuming execution of the program (Addressed to limitations in Claims 8); and

- Hanson fails to disclose during a time when execution of the program is halted, removing all breakpoints associated with a particular job from the program; executing a task to identify each useful breakpoint located in the program, wherein a useful breakpoint is one which may be encountered upon resuming execution of the program" (Addressed to limitations in Claims 12 or 28).

Therefore, the following is an examiner's statement of reasons for allowance: The cited prior arts taken alone or in combination fail to teach claimed invention, computer-implemented methods, for checking and generating a trace for a model of a program comprising at least features,

*"wherein the at least one useful breakpoint is determined by one of:*

*executing a task to identify each unexecuted breakpoint located in an unexecuted portion of the program; and analyzing a behavior of a user responsible for setting the at least one useful breakpoint"*, recited in independent Claims 4 and 24;

*"wherein upon returning control from the debugger to the program at least one thread is prevented from continuing execution and wherein any breakpoints which may have been encountered only by the at least one thread during continuing execution are considered useless and are not reestablished"*, recited in independent Claims 7 and 27;

*"(i) determining whether at least one useful breakpoint exists in the program for the particular job and (ii) determining whether at least one of the removed breakpoints is useful comprises executing a task to identify at least one breakpoint which may be encountered upon resuming execution of the program"*, recited in independent Claim 8,

and so as,

*"during a time when execution of the program is halted, removing all breakpoints associated with a particular job from the program; executing a task to identify each useful breakpoint located in the*

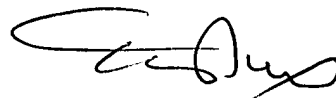
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*program, wherein a useful breakpoint is one which may be encountered upon resuming execution of the program", recited in independent Claims 12 and 28.*

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ted T. Vo whose telephone number is (571) 272-3706. The examiner can normally be reached on 8:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571) 272-3694. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ted T. Vo  
Primary Examiner  
Art Unit 2122  
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